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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,340	05/15/2001	Albert E. Rackett	019838-001910US	1080

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EXAMINER

DIEP, NHON THANH

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,340

Applicant(s)

RACKETT

Examiner

Nhon T Diep

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because figures 1, 3, 4, 6 and 7 are the same and the examiner does not see the need to have all five figures. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8, 10, 13-15, 18-19 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sethuraman et al (US 6,539,124).

Sethuraman et al discloses a video encoding and decoding apparatus comprising the same method for processing digital video signals for live video applications, the method comprising: providing video data comprising a plurality of frames; identifying a first frame and a second frame in the frame sequences; processing the information of the first frame and the information of the second frame to determine a quantization step value for the second frame; and adjusting a transmission bit rate for

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the second frame in response to the quantization step value (col. 4, ln. 51 – col. 5, ln. 3 and col. 4, ln. 1-3 whereas each image can be treated as a single region, different quantization step = different bit rate; and col. 6, ln. 46-65) as specified in claims 1 and 13; assigning compression module to the frames (col. 4, ln. 1-3 whereas each image can be treated as a single region) as specified in claim 2; compression modules are selected from a group comprising I-mode, P-mode, and B-mode (col. 4, ln. 51 – col. 5, ln. 3) as specified in claim 3; further comprises: calculating a sigmaSAD value for the second frame; calculating a divisor for the second frame; calculating the quantization for the second frame (col. 5, ln. 8: equation (1)) as specified in claims 4, 14 and 18; further comprises: calculating a SAD value for each microblock of the second frame; storing the SAD value in a memory unit for each microblock of the second frame; calculating the sum of all the SAD values for the second frame; dividing the sum by the total number of microblocks of the second frame (col. 5, ln. 23-25, it is inherently included in the step of obtaining average SAD; and equation (1) can be rewritten as $Q = S / ((R-H)/X) + (-XCQ/(R-H))$ and therefore, $\text{sigmaSAD} = S$ which is average SAD; a divisor = $(R-H)/X$; and a constant = $-XCQ/(R-H)$; and col. 6, ln. 46-65) as specified in claims 5, 8, 15 and 19; deciding whether to encode a frame in the I-mode before any P-frame encoding is accomplished (for a new GOP, the first frame must be intra-coded; col. 1, ln. 33-59) as specified in claims 10 and 22.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sethuraman et al.

As applied to claim 1 above, it is noted that Sethuraman et al does not particularly disclose the step of determining the locations of I-frames in the step of providing video data; extending frames immediately preceding the I-frames for one additional frame time; skipping frames immediately following the I-frame () as specified in claim 12. The examiner takes Official Notice with regard to frame extending, repeating and/or skipping, dropping. It is well known in the pertinent art that skipping or extending frames are well known techniques to avoid buffer overflow and or underflow and therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Sethuraman et al by skipping or extending frames and since I frames are anchor frames that need to be reserved for encoding/decoding other frames so it would also have been obvious to skip or extend frames preceding and/or following I frames since those frames still are stored in the buffer memory.

Allowable Subject Matter

6. Claims 6-7, 9, 11, 16-17, and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Ozkan (US 5,864,583) discloses a parameter sampling apparatus.
- b. Suzuki et al (US 6,415,124) discloses a method and apparatus for selective control of degree of picture compression.
- c. Chujoh et al (US 6,188,792) discloses a video encoding and decoding apparatus.
- d. Rosenberg (US 6,088,392) discloses bit rate coder for differential quantization.
- e. Kondo (US 5,196,931) discloses a highly efficient coding apparatus.
- f. Craven et al (US 6,664,913) discloses a lossless coding method for waveform data.
- g. Keith et al (US 5,493,513) discloses a process, apparatus and system for encoding video signals using motion estimation.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703 87209314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-2600.

ND
12 March 2004

A handwritten signature in black ink, appearing to read 'DhNhon', written over a horizontal line.

NHON DIEP
PRIMARY EXAMINER